AMENDMENTS TO THE CLAIMS

The claims and their status are reflected below. Claims 1-31 are pending in the application, prior to any amendments herein as shown below.

1.   (original) A removable memory card for storing data in a non-volatile, non-rotating storage medium, comprising:

a host interface;

a non-volatile memory array; and

a buffer cache in communication with the host interface and the non-volatile memory array, the buffer cache having at least a first portion and a second portion for storing data, the first portion having a first policy, the second portion having a second policy, the first policy and the second policy being separately selected.

2.   (original) The removable memory card of claim 1 wherein the first policy is a write-through cache policy.

3.   (original) The removable memory card of claim 1 wherein the first policy is a write-back cache policy.

4.   (original) The removable memory card of claim 1 wherein the first portion functions as a read cache such that when a first group of data that is stored in the non-volatile memory array is requested, the first group of data and a second group of data that is not requested are read from the non-volatile memory array and the second group of data is stored in the first portion.

5.   (original) The removable memory card of claim 1 wherein the first portion is used to store data that is used by a central processing unit that is not part of a data stream.

6.   (original) The removable memory card of claim 1 wherein the first portion and the second portion are segments of a segmented cache.

7.   (original) The removable memory card of claim 1 further comprising a third portion having a third policy and a fourth portion having a fourth policy.

8.   (original) The removable card of claim 7, further comprising a central processing unit, wherein the first policy is a write-through policy, the second policy is a write-back policy, the third policy is a read cache policy and the fourth policy is a central processing unit data storage policy.

9.   (original) The removable card of claim 1 wherein the size of the first portion may be modified.

10.   (original) The removable card of claim 1 wherein the size of the first portion may be modified during operation of the card in response to host command sequences.

11.   (original) The removable card of claim 1 further comprising a central processing unit that controls the operation of the buffer cache.

12.   (withdrawn) A method of handling data streams between a host interface and a flash memory array within a removable memory card using a buffer cache in communication with both the host interface and the flash memory array, comprising:
        partitioning the buffer cache into at least a first segment and a second segment;
        determining a first caching policy for the first segment; and
        determining a second caching policy for the second segment.

13.   (withdrawn) The method of claim 12 wherein the first caching policy is determined according to characteristics of a first data stream and the second caching policy is determined according to characteristics of a second data stream.

14.   (withdrawn) The method of claim 12 wherein the first caching policy is a write-through policy.

15. (withdrawn) The method of claim 12 wherein the first caching policy is a write-back policy.

16. (withdrawn) The method of claim 12 wherein the first caching policy is a read-look-ahead policy.

17. (withdrawn) The method of claim 12 further comprising modifying the first segment in size.

18. (withdrawn) A method of transferring data from a non-volatile, non-rotating memory array to a host interface in a memory card using a buffer cache disposed between the non-volatile memory array and the host interface, the host interface connecting the memory card to a host, comprising:

receiving a first address range from the host that identifies a first portion of data to be transferred from the non-volatile memory array;

copying the first portion of data from the non-volatile memory array to the buffer cache;

copying a second portion of data from the non-volatile memory array to the buffer cache, the second portion of data not being identified by the host for transfer from the non-volatile memory array; and

sending the first portion of data from the buffer cache to the host while keeping the second portion of data in the buffer cache.

19. (withdrawn) The method of claim 18 wherein the second portion of data has a second address range, the first address range and the second address range being sequential.

20. (withdrawn) The method of claim 18 wherein the second portion of data is selected to be of the maximum size that allows parallel reading of the second portion of data with the first portion of data from the non-volatile memory array.

21. (withdrawn) The method of claim 18 wherein the second portion of data is selected to be of the maximum size that may be stored in the buffer cache or in a segment of the buffer cache.

Attorney Docket No.: SNDK.344US0   **Application No.: 10/796,575**

- 4 of 7 -

22.   (withdrawn) The method of claim 18 further comprising, subsequent to sending the first portion of data from the buffer cache to the host, receiving a third address range that identifies data to be transferred to the host, the third address range identifying at least a third portion of data that is in the second portion of data, the method further comprising transferring the third portion of data directly from the buffer cache to the host and not from the non-volatile memory.

23.   (original) A removable memory card for storing data in a non-volatile, non-rotating storage medium, comprising:

a host interface for connecting to a host;

a non-volatile, non-rotating memory array; and

a read-look-ahead cache interposed between the host interface and the non-volatile, non-rotating memory array, the read-look-ahead cache storing a non-requested portion of data that is sequential to a requested portion of data requested by the host.

24.   (original) The removable memory card of claim 23 wherein the read-look-ahead cache is a segment of a segmented buffer cache.

25.   (original) The removable memory card of claim 23 wherein the non-requested portion of data is the maximum amount of data that may be stored in the read-look-ahead cache.

26.   (original) The removable memory card of claim 23 further comprising a central processing unit that controls the read-look-ahead cache and a static random access memory connected to the central processing unit.

27.   (withdrawn) A method of operating a removable memory system connected to a host, the memory system including a non-volatile, non-rotating memory array and a volatile memory, comprising:

receiving a first command from the host; and

enabling at least one background operation in the removable memory system in response to the first command, the memory system remaining enabled for the at least one background operation for the duration of two or more transactions subsequent to the first command.

28.   (withdrawn) The method of claim 27 wherein the first command is a session command that indicates that indicates that storage of data in the volatile memory may be enabled for a period of time.

29.   (withdrawn) The method of claim 27 wherein the background operation that is enabled includes storage of data in the volatile memory that is not stored in the non-volatile, non-rotating memory array.

30.   (withdrawn) The method of claim 27 wherein the at least one background operation includes a garbage collection operation to more efficiently store data in the non-volatile memory.

31.   (withdrawn) The method of claim 27 further comprising receiving a second command and disabling the at least one background operation in the removable memory system

Attorney Docket No.: SNDK.344US0

- 6 of 7 -

Application No.: 10/796,575